

Listing of Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Claim 1 (currently amended): An isolated antibody capable of binding an extracellular Aspergillus fumigatus polypeptide selected from the group consisting of: isopropylmalate dehydrogenase B (SEQ ID NO: 36), CssI (SEQ ID NO: 1), hydrophobin (SEQ ID NO: 2), GAPDH-B (SEQ ID NO: 3), and catalase A (SEQ ID NO: 6).

Claim 2 (canceled)

Claim 3 (currently amended): The antibody of ~~any of the preceding claims~~ Claim 1, wherein the antibody is selected from the group consisting of: IgG, IgA, IgE, IgM and IgD, wherein IgG preferably is IgG1.

Claim 4 (currently amended): The antibody of ~~any of the preceding claims~~ Claim 1, wherein the antibody is capable of binding an intact Aspergillus fumigatus cell.

Claims 5 and 6 (canceled)

Claim 7 (currently amended): The antibody of ~~any of claims 1-6~~ Claim 1, wherein the antibody is polyclonal.

Claim 8 (currently amended): The antibody of ~~any of claims 1-6~~ Claim 1, wherein the antibody is monoclonal.

Claim 9 (currently amended): The antibody of claim 8, wherein the antibody is a chimeric, human or ~~humanised~~ humanized antibody.

Claim 10 (original): The antibody of claim 8, wherein the antibody is a human antibody.

Claim 11 (currently amended): The antibody of ~~any of the preceding claims~~ Claim 1, wherein the antibody is purified.

Claim 12 (currently amended): The antibody of ~~any of the preceding claims~~ Claim 1, wherein the antibody is further capable of binding a homologous polypeptide, wherein the homologous

polypeptide has a sequence identity of at least 39% ~~or more~~, such as 42% or more, e.g. 48% or more, ~~such as~~ 68% or more, e.g. 80% or more, ~~such as~~ or 90% or more, to a polypeptide selected from the group consisting of: isopropylmalate dehydrogenase B (SEQ ID NO: 36), CssI (SEQ ID NO: 1), hydrophobin (SEQ ID NO: 2), GAPDH-B (SEQ ID NO: 3), and catalase A (SEQ ID NO: 6).

Claim 13 (original): The antibody of claim 12, wherein said homologous polypeptide originates from:

- an Aspergillus species, such as Aspergillus fumigatus, Aspergillus nidulans, Aspergillus niger, or Aspergillus oryzae,
 - Neurospora crassa,
 - Saccharomyces cerevisiae,
 - a Candida species such as Candida albicans,
 - a Coccidioides species, such as Coccidioides posadasii, or Coccidioides immitis,
 - a Cryptococcus species, such as Cryptococcus neoformans var. neoformans,
 - a Fusarium species,
 - a Pneumocystis species,
 - a Penicillium species,
- or
- Histoplasma capsulatum.

Claim 14 (original): The antibody of claim 13, wherein said homologous polypeptide originates from:

- an Aspergillus species, such as Aspergillus fumigatus, Aspergillus nidulans, Aspergillus niger or Aspergillus oryzae,
- Candida albicans,
- Coccidioides posadasii,

or

- Cryptococcus neoformans var. neoformans.

Claim 15 (original): The antibody of claim 14, wherein said homologous polypeptide originates from an Aspergillus species, such as Aspergillus fumigatus, Aspergillus nidulans, Aspergillus niger or Aspergillus oryzae.

Claim 16 (original): The antibody of claim 15, wherein said homologous polypeptide originates from Aspergillus fumigatus.

Claim 17 (original): The antibody of claim 16, wherein the said homologous polypeptide is the polypeptide of SEQ ID NO: 41.

Claims 18 - 20 (canceled)

Claim 21 (currently amended): The antibody of ~~any of the preceding claims~~ Claim 1, wherein the antibody is capable of binding a polypeptide selected from the group consisting of: isopropylmalate dehydrogenase B (SEQ ID NO: 36), CssI (SEQ ID NO: 1) and catalase A (SEQ ID NO: 6).

Claim 22 (currently amended): The antibody of ~~any of the preceding claims~~ Claim 1, wherein the antibody is capable of binding a polypeptide selected from the group consisting of: isopropylmalate dehydrogenase B (SEQ ID NO: 36) and CssI (SEQ ID NO: 1).

Claim 23 (currently amended): The antibody of ~~any of the preceding claims~~ Claim 1, wherein the antibody is capable of binding isopropylmalate dehydrogenase B (SEQ ID NO: 36).

Claim 24 (original): The antibody of claim 23, wherein the antibody is capable of binding an epitope which comprises one or more of the residues of a region of SEQ ID NO: 36 selected from the group consisting of: Ser67- Leu71, Ala74-Trp80, Ser191-Arg205, Leu268-Leu273, His292-Pro296, Glu355-Ile360, Asp193-Glu209, Asp193-Ala199, Ile15-Val19, Val75-Trp80, Pro11-Glu18 and the region defined by SEQ ID NO: 37, preferably an epitope which is entirely consisting of residues comprised within said region.

Claim 25 (currently amended): A pharmaceutical composition comprising an antibody as defined in ~~any of claims 1-24~~ Claim 1 and a pharmaceutically-acceptable carrier.

Claim 26 (canceled)

Claim 27 (currently amended): ~~Use of an antibody as defined in any of claims 1-24 or a composition as defined in claim 25 for the manufacture of a medicament for the A method for the treatment or prevention of fungal infections infection, comprising administering to an individual a pharmaceutically-effective amount of an antibody as defined in claim 1.~~

Claim 28 (currently amended): Use The method of claim 27, wherein the fungal infection is an medicament is a medicament for the treatment or prevention of Aspergillus infections infection, preferably an Aspergillus fumigatus infections infection.

Claim 29 (currently amended): Use The method of claim 27, wherein the medicament is a medicament for the treatment or prevention of a fungal disease infection being treated or prevented is selected from the group consisting of: invasive aspergillosis, aspergilloma, and allergic aspergillosis, such as allergic bronchopulmonary aspergillosis.

Claim 30 (currently amended): A composition comprising one or more Aspergillus fumigatus polypeptides selected from the group consisting of:

polypeptides comprising SEQ ID NO: 36, fragments thereof and variants thereof, fragments of SEQ ID NO: 1 of less than 259 amino-acid residues in length, such as less than 200, preferably less than 150, such as less than 100, e.g. such as less than 50, such as less than 25 amino-acid residues in length comprising one or more residues of the amino-acid sequences set forth in SEQ ID NOS: 7, 8, 17, 26, 28, 29 and/or 30 and variants of said fragments;

fragments of SEQ ID NO: 2 of less than 106 amino-acid residues in length, such as less than 75, preferably less than 50, such as less than 25 residues in length comprising one or more residues of the amino-acid sequences set forth in SEQ ID NOS: 9, 10, 18 and/or 19 and variants of said fragments;

polypeptides comprising SEQ ID NO: 3, fragments thereof and variants thereof, with the proviso that if the polypeptide is a fragment of SEQ ID NO: 3, that this fragment is not the fragment set forth in SEQ ID NO: 35;

fragments of SEQ ID NO: 4 of less than 437 amino-acid residues in length, such as less than 200, preferably less than 100, such as less than 75, e.g. such as less than 50, such as less than 25 amino-acid residues in length comprising one or more residues of the amino-acid sequences set forth in SEQ ID NOS: 13, 14, 23, 24 and/or 25 and variants of said fragments;

fragments of SEQ ID NO: 5 of less than 727 amino-acid residues in length, e.g. such as less than 400, such as less than 200, preferably less than 100, such as less than 75, e.g. such as less than 50, such as less than 25 amino-acid residues in length comprising one or more residues of the amino-acid sequences set forth in SEQ ID NOS: 15, 16 and/or 27 and variants of said fragments; and

fragments of SEQ ID NO: 6 of less than 748 amino-acid residues in length, e.g. such as less than 400, such as less than 200, preferably less than 100, such as less than 75, e.g. such as less than 50, such as less than 25 amino-acid residues in length comprising one or more residues of the amino-acid sequences set forth in SEQ ID NO: 34 and variants of said fragments.

Claim 31 (currently amended): An *Aspergillus fumigatus* polypeptide selected from the group consisting of:

polypeptides comprising SEQ ID NO: 36, fragments thereof and variants thereof, fragments of SEQ ID NO: 1 of less than 259 amino-acid residues in length, such as less than 200, preferably less than 150, such as less than 100, e.g. such as less than 50, such as less than 25 amino-acid residues in length comprising one or more residues of the amino-acid sequences set forth in SEQ ID Nº NOS: 7, 8, 17, 26, 28, 29 and/or 30 and variants of said fragments;

fragments of SEQ ID NO: 2 of less than 106 amino-acid residues in length, such as less than 75, preferably less than 50, such as less than 25 residues in length comprising one or more residues of the amino-acid sequences set forth in SEQ ID Nº NOS: 9, 10, 18 and/or 19 and variants of said fragments;

polypeptides comprising SEQ ID NO: 3, fragments thereof and variants thereof, with the proviso that if the polypeptide is a fragment of SEQ ID NO: 3, that this fragment is not the fragment set forth in SEQ ID NO: 35;

fragments of SEQ ID NO: 4 of less than 437 amino-acid residues in length, such as less than 200, preferably less than 100, such as less than 75, e.g. such as less than 50, such as less than 25 amino-acid residues in length comprising one or more residues of the amino-acid sequences set forth in SEQ ID Nº NOS: 13, 14, 23, 24 and/or 25 and variants of said fragments;

fragments of SEQ ID NO: 5 of less than 727 amino-acid residues in length, e.g. less than 400, such as less than 200, preferably less than 100, such as less than 75, e.g. such as less than 50, such as less than 25 amino-acid residues in length comprising one or more residues of the amino-acid sequences set forth in SEQ ID Nº NOS: 15, 16 and/or 27 and variants of said fragments; and

fragments of SEQ ID NO: 6 of less than 748 amino-acid residues in length, e.g. such as less than 400, such as less than 200, preferably less than 100, such as less than 75, e.g. less than 50, such as less than 25 amino-acid residues in length comprising one or more residues of the amino-acid sequences set forth in SEQ ID NO: 34 and variants of said fragments.

Claim 32 (original): The polypeptide of claim 31, wherein the polypeptide is a fragment comprising one or more residues of the amino-acid sequences set forth in SEQ ID NOs: 7-27 and/or 37, or a variant of said fragment.

Claim 33 (original): The polypeptide of claim 32, wherein the polypeptide is a fragment comprising one or more residues of the amino-acid sequences set forth in SEQ ID NOs: 7-16, or a variant of said fragment.

Claim 34 (original): The polypeptide of claim 32, wherein the polypeptide is a fragment comprising one or more residues of the amino-acid sequences set forth in SEQ ID NOs: 17-25 and/or SEQ ID NO: 14, or a variant of said fragment.

Claim 35 (original): The polypeptide of claim 32, wherein the polypeptide is a fragment comprising one or more residues of the amino-acid sequences set forth in SEQ ID NO: 18, 19, 26, 27, and/or 37, or a variant of said fragment.

Claim 36 (currently amended): A polynucleotide encoding a polypeptide as defined in ~~any of claims 31-35~~ Claim 31.

Claim 37 (original): An expression vector comprising a polynucleotide as defined in claim 36.

Claim 38 (currently amended): A host cell transformed or transfected with a polynucleotide as defined in claim 36 ~~and/or an expression vector as defined in claim 37~~.

Claim 39 (currently amended): A pharmaceutical composition comprising a polypeptide as defined in ~~any of claims 31-35 or a polynucleotide as defined in claim 36~~ Claim 31 and a pharmaceutically-acceptable carrier.

Claim 40 (canceled)

Claim 41 (currently amended): ~~Use of a polypeptide as defined in any of claims 31-35, a polynucleotide as defined in claim 36 for the manufacture of a medicament~~ A method for the immunisation immunization of a mammal against fungal infections, comprising the administration of a polypeptide as defined in claim 31.

Claim 42 (currently amended): The use method of claim 41, wherein said mammal is a human being.

Claim 43 (currently amended): A method for raising specific antibodies to a polypeptide selected from the group consisting of polypeptides set forth in SEQ ID NO: 1, 2, 3, 6 and 36 in a non-human mammal comprising the steps of:

- a. providing a polypeptide selected from the group consisting of: isopropylmalate dehydrogenase B (SEQ ID NO:36), CssI (SEQ ID NO:1), hydrophobin (SEQ ID NO:2), GAPDH (SEQ ID NO:3), and catalase A (SEQ ID NO:6), or a polypeptide as defined in ~~any of claims 31-35~~ Claim 31, or a cell expressing any of these polypeptides,
- b. introducing a composition comprising said polypeptide or said cell into said animal,
- c. raising antibodies in said animal, and
- d. isolating and optionally purifying the antibodies.

Claim 44 (original): The method of claim 43, wherein the raising of antibodies is done in a transgenic animal which is capable of producing human antibodies.

Claim 45 (currently amended): The method of claim 43 ~~or 44~~, wherein the polypeptide that is provided is isopropylmalate dehydrogenase B (SEQ ID NO: 36) or a fragment thereof, or a variant of said polypeptide.

Claim 46 (currently amended): The method of claim 43 ~~or 44~~, wherein the polypeptide that is provided is CssI (SEQ ID NO: 1) or a fragment thereof, or a variant of said polypeptide.

Claim 47 (currently amended): The method of claim 43 ~~or 44~~, wherein the polypeptide that is provided is hydrophobin (SEQ ID NO: 2) or a fragment thereof, or a variant of said polypeptide.

Claim 48 (currently amended): The method of claim 43 ~~or 44~~, wherein the polypeptide that is provided is GAPDH-B (SEQ ID NO: 3) or a fragment thereof, or a variant of said polypeptide.

Claim 49 (currently amended): The method of claim 43 ~~or 44~~, wherein the polypeptide that is provided is catalase A (SEQ ID NO: 6) or a fragment thereof, or a variant of said polypeptide.

Claim 50 (currently amended): A method for identifying a binding partner of a polypeptide selected from the group consisting of: isopropylmalate dehydrogenase B (SEQ ID NO:36), CssI (SEQ ID NO:1), hydrophobin (SEQ ID NO:2), GAPDH-B (SEQ ID NO: 3), enolase (SEQ ID NO: 4), catalase B (SEQ ID NO: 5) and catalase A (SEQ ID NO: 6), comprising the steps of :

- a. providing a polypeptide as defined in ~~any of claims 31-35~~ Claim 31 or a polypeptide selected from the group consisting of: isopropylmalate dehydrogenase B (SEQ ID NO: 36), CssI (SEQ ID NO: 1), hydrophobin (SEQ ID NO: 2), GAPDH-B (SEQ ID NO: 3), catalase B (SEQ ID NO: 5), and catalase A (SEQ ID NO: 6),
 - b. contacting said polypeptide with a putative binding partner, and
 - c. determining whether said putative binding partner is capable of binding to said polypeptide.

Claim 51 (original): The method of claim 50, wherein the putative binding partner is a host-derived molecule.

Claim 52 (currently amended): The method of ~~any of claims 50-51~~ Claim 50, wherein said method is repeated for a plurality of putative binding partners.

Claim 53 (currently amended): A method for identifying a compound with antifungal activity comprising the steps of:

- a. providing a sensitised sensitized cell which has a reduced level of a polypeptide selected from the group consisting of: SEQ ID NOs: 1, 2, 3, 5, 6, and 36 and
- b. determining the sensitivity of said cell to a putative antifungal compound, for instance by a growth assay.

Claim 54 (currently amended): A method for identifying an inhibitor of an extracellular *Aspergillus* polypeptide selected from the group consisting of: isopropylmalate dehydrogenase B (SEQ ID NO: 36), CssI (SEQ ID NO: 1), GAPDH (SEQ ID NO: 3), and catalase A (SEQ ID NO: 6), comprising the steps of:

- a. providing two cells which differ in the level of a polypeptide selected from the group consisting of: isopropylmalate dehydrogenase B (SEQ ID NO: 36), CssI (SEQ ID NO: 1), GAPDH (SEQ ID NO: 3), and catalase A (SEQ ID NO: 6),
- b. determining the sensitivity of said cells to a putative inhibitor, for instance by a growth assay, and
- c. determining whether said two cells are differently affected by the presence of said putative inhibitor.

Claim 55 (original): The method of claim 54, wherein the two cells differ in the copy number of said polypeptide.

Claim 56 (original): The method of claim 54, wherein the two cells differ in the activity of said polypeptide.

Claim 57 (currently amended): A method of diagnosing fungal infection, preferably Aspergillus fumigatus, infection comprising the steps of:

- a. providing a sample from an individual,
- b. contacting said sample with an indicator moiety capable of specifically recognising recognizing and binding a polypeptide selected from the group consisting of: isopropylmalate dehydrogenase B (SEQ ID NO:36), CssI (SEQ ID NO:1), hydrophobin (SEQ ID NO: 2), GAPDH-B (SEQ ID NO: 3), and catalase A (SEQ ID NO: 6), and
- c. determining whether a signal has been generated by the indicator moiety.

Claim 58 (currently amended): The method of the preceding claim Claim 57, wherein said indicator moiety ~~is~~ or comprises an antibody, such as an antibody as defined in ~~any of claims 1-24~~ Claim 1.

Claim 59 (currently amended): A kit for the detection of fungal material, preferably intact fungal cells, most preferably intact Aspergillus fumigatus cells, in a biological sample comprising:

- a. an indicator moiety capable of specifically recognising recognizing and binding a polypeptide selected from the group consisting of: isopropylmalate dehydrogenase B (SEQ ID NO: 36), CssI (SEQ ID NO:1), hydrophobin (SEQ ID NO: 2), GAPDH-B (SEQ ID NO: 3), and catalase A (SEQ ID NO: 6),~~and~~ ;
- b. ~~one or more of~~ a at least one buffer for promoting binding of the indicator moiety to the fungal material;
- c. at least one [[a]] reagent for generating a detectable signal; and
- d. at least one written user instructions ~~to the user~~.

Claim 60 (currently amended): The kit of claim 59, wherein said indicator ~~is~~ or comprises an antibody, such as an antibody as defined in ~~any of claims 1-24~~ Claim 1.

Claim 61 (new): The antibody of claim 1, wherein the antibody is conjugated to a therapeutic moiety, such as a toxin or a fungicidal agent, or coupled to a detectable substance, such as a radioactive material.

Claim 62 (new): The method of claim 27, wherein the method is combined with other antifungal therapy.

Claim 63 (new): A host cell transformed or transfected with an expression vector as defined in Claim 37.

Claim 64 (new): A pharmaceutical composition comprising a polynucleotide as defined in Claim 36 and a pharmaceutically-acceptable carrier.

Claim 65 (new): A method for the immunization of a mammal against fungal infections, comprising the administration of a polynucleotide as defined in Claim 31.